

REMARKS

Claim Rejections – 35 U.S.C. § 102

Claims 13, 14, 17, 18, 20, and 24 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kutscher et al. (U.S. Patent 6,212,451). Kutscher et al. is a member of the same patent family and has the same disclosure as DE 198 12 234 C2, which has been distinguished in the Background of the Invention of the present application in paragraphs [0008] and [0009].

Kutscher employs a mathematical model for present heat transfer conditions based on the air temperature and air flow speed. But it does not consider the compressor's own cyclic temperature by means of a mathematical-physical model characterizing the cooling and heating properties of the compressor. Kutscher's model is limited to modeling the ambient temperature, not the compressor's temperature, and uses the ambient temperature to modify operating times without considering the compressor's temperature (see equations and variables in columns 3 and 4). There is no quantity representing the compressor's temperature. Accordingly, Kutscher only varies the compressor's operating time based on air conditions, not based on compressor temperature, which changes depending on prior operation and air flow conditions.

As described in the present application's Background of the Invention, not taking into account the compressor's own temperature is a rather imprecise way of determining operating times. This may, for instance, result in operating the compressor while its temperature is very high (because the air flow conditions have recently changed).

Meier, in contrast, does consider the compressor's temperature, but he uses a temperature sensor and does not present a suitable model to calculate the compressor temperature. Meier does say in column 2, lines 13-18, that a thermal model could be a back-up solution in case of a failure of the temperature sensor, but this is rather an afterthought than a solution, for no such model is described anywhere in the specification.

Claim 13 has been amended to include all limitations of claim 14, which describes the model used to calculate the compressor temperature. Applicant therefore believes that claim 13 as amended is neither anticipated by nor obvious over Kutscher et al. and/or Meier.

Claim 14 has been canceled, and claims 15, 17, and 19 have been amended to depend on claim 13 instead of 14. Claims 15-24 now all—directly or indirectly—depend on claim 13, which is believed to be allowable and are thus believed to be allowable as well.

Claim Rejections – 35 U.S.C. § 103

Claims 15, 16, 19, and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kutscher et al. in view of Meier et al. (U.S. Patent 6,799,950).

Since these claims now depend on a non-obvious claim, they are not obvious over the prior art, either.

CONCLUSION

Applicant believes that all claims are now in proper shape for allowance.

Respectfully submitted,

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